

ABSTRACT

Ball-and-roller bearing parts are alloyed with alloyed
with 0.6% to 1.3% by weight of C, 0.3% to 3.0% by weight of
5 Si, 0.2% to 1.5% by weight of Mn, 0.03% by weight or less of
P, 0.03% by weight or less of S, 0.3% to 5.0% by weight of
Cr, 0.1% to 3.0% by weight of Ni, 0.050% by weight or less
of Al, 0.003% by weight or less of Ti, 0.0015% by weight or
less of O, and 0.015% by weight or less of N with the
10 remainder being made up of Fe and inevitable impurities. The
part has a nitrogen-enriched layer. The austenite crystals
of the steel have a grain size number of greater than 10.